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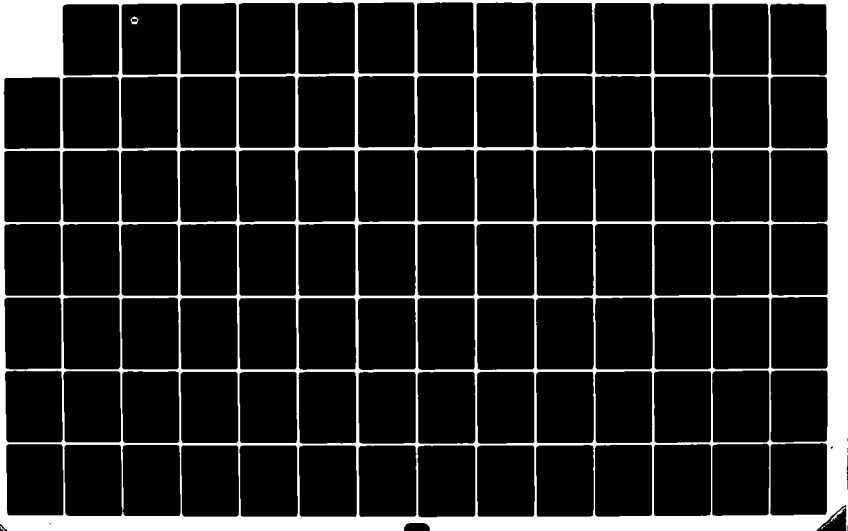

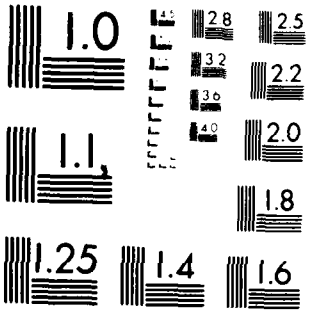

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BIBLIOGRAPHY OF SOVIET LASER DEVELOPMENTS

No. 59

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Vice Director for Foreign Intelligence
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20. ABSTRACT

This is the Soviet Laser Bibliography for May-June 1982, and is No. 59 in a continuing series on Soviet laser developments. The coverage includes basic research on solid state, liquid, gas, and chemical lasers; components; nonlinear optics; spectroscopy of laser materials; ultrashort pulse generation; theoretical aspects of advanced lasers; and general laser theory. Laser applications are listed under biological effects; communications; beam propagation; computer technology; holography; laser-induced chemical reactions; measurement of laser parameters; laser measurement applications; laser-excited optical effects; laser spectroscopy; beam-target interaction; and plasma generation and diagnostics.

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Introduction

This bibliography has been compiled under an interagency agreement as a continuing effort to document current Soviet-bloc developments in the quantum electronics field. The period covered is May-June 1982, and includes all significant laser-related articles received by us in that interval. The bulk of the entries come from the approximately 30 periodicals which are known to publish the most significant findings in Soviet laser technology. Citations from the Russian Reference Journals are also included. Laser items from the popular or semipopular press are generally omitted.

For convenience we have abbreviated frequently cited source names; a source abbreviations list and an author index are included. All aources cited with no parenthetical notation are available at the Library of Congress. A parenthetical entry (RZh, KL) indicates the secondary source in which the citation was found as a bibliographic entry or abstract, but for which the original source is not currently available at the Library. The authors' affiliations are indicated by the numbers in parentheses following the authors' names in the text and are listed in the Author Affiliations List. New affiliations are assigned a new number and are added to a cumulative list which includes all affiliations from 1969 to the present. Only those affiliations which appear in this issue are listed in this issue's Author Affiliations List.

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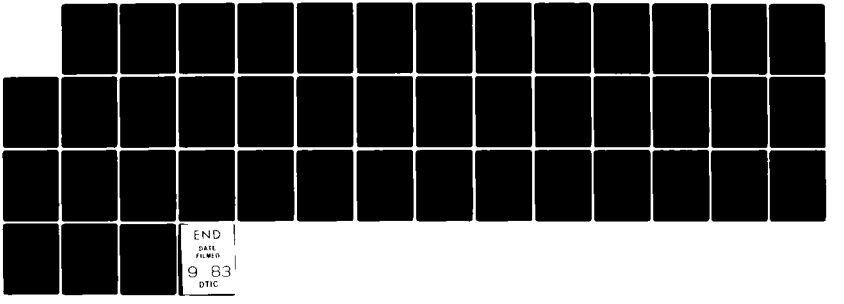

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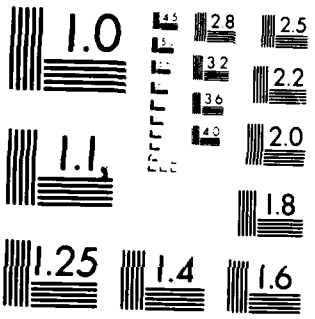

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J. BEAM-TARGET INTERACTION

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IV. SOURCE ABBREVIATIONS

	(CIRC Codens)	
APP	(APTLB)	Acta physica polonica
BAPS Chim	(BAPCA)	Bulletin de l'Academie Polonaise des Sciences. Serie des Sciences Chimique
CCCC	(CCCCA)	Collection of Czechoslovak Chemical Communications
CJP	(CZYPA)	Czechoslovak Journal of Physics
DAN Arm	(DANAA)	Akademiya nauk Armyanskoy SSR. Doklady
DAN Az	(DAZRA)	Akademiya nauk Azerbaydzhanskoy SSR. Doklady
DAN B	(DBLRA)	Akademiya nauk Belorusskoy SSR. Doklady
DAN SSSR	(DANKA)	Akademiya nauk SSSR. Doklady
DAN Ukr	(DUKAB)	Akademiya nauk Ukrayinskoi RSR. Dopovidi. Seriya A. Fiziko-matematychni ta tekhnichni nauky
DAN Uz	(DANUA)	Akademiya nauk Uzbekskoy SSR. Doklady
DBAN	(CRABA)	Bulgarska akademiya na naukite. Doklady
DR	(DERUB)	Deponirovannyye rukopisi
EOM	(EOBMA)	Elektronnaya obrabotka materialov
ETP	(EXPPA)	Experimentelle Technik der Physik
FAiO	(IFAOA)	Akademiya nauk SSSR. Izvestiya. Fizika atmosfery i okeana
FGiV	(FGVZA)	Fizika goreniya i vzryva
FiKhOM	(FKOMA)	Fizika i khimiya obrabotki materialov
FiKhS	(FKSTD)	Fizika i khimiya stekla
FTP	(FTPPA)	Fizika i tekhnika poluprovidnikov
FTT	(FTVTA)	Fizika tverdogo tela
IAN Arm	(IAAFA)	Akademiya nauk Armyanskoy SSR. Izvestiya. Fizika
IAN Arm Tekh	(IATNA)	Akademiya nauk Armyanskoy SSR. Izvestiya. Seriya tekhnicheskikh nauk
IAN B	(VABFA)	Akademiya nauk Belorusskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk
IAN Fiz	(IANFA)	Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya
IAN M. Biol	(IMBKB)	Akademiya nauk Moldavskoy SSR. Seriya biologicheskikh i khimicheskikh nauk
IT	(IZTEA)	Izmeritel'naya tekhnika
IVUZ Fiz	(IVUVA)	Izvestiya vysshikh uchebnykh zavedeniy. Fizika

IVUZ Priboro	(IVUBA)	Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye
IVUZ Radioelektr	(IVUZB)	Izvestiya vysshikh uchebnykh zavedeniy. Radioelektronika
IVUZ Radiofiz	(IVYRA)	Izvestiya vysshikh uchebnykh zavedeniy. Radiofizika
JS	(-----)	Journal Signalaufzeichnungsmaterialen
KE	(KVEKA)	Kvantovaya elektronika
KhVE	(KHVKA)	Khimiya vysikikh energiy
KL	(KNLTA)	Knizhnaya letopis'
KLDVAD	(-----)	Knizhnaya letopis'. Dopitel'nyy vypusk. Avtoreferaty dissertatsii
KSpF	(KRSFA)	Kratkiye soobshcheniya po fizike
MiTOM	(MTOMA)	Metallovedeniye i termicheskaya obrabotka materialov
MZhiG	(IMZGA)	Akademiya nauk SSR. Izvestiya. Mekhanika zhidkosti i gaza
NM	(IVNMA)	Akademiya nauk SSR. Izvestiya. Neorganicheskiye materialy
OiS	(OPSPA)	Optika i spektroskopiya
OMP	(OPMPA)	Optiko-mekhanicheskaya promyshlennost'
Otkr izobr	(OIPOB)	Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki
Poverkh	(-----)	Poverkhnost'. Fizika, khimiya, mekhanika
OZh	(OFZHA)	Oftal'mologicheskiy zhurnal
PSS	(PSSAB) (PSSBB)	Physica Status Solidi (A). Applied Research (B). Basic Research
PTE	(PRTEA)	Pribory i tekhnika eksperimenta
RiE	(RAELA)	Radiotekhnika i elektronika
RRP	(RRPZA)	Revue Roumaine de physique
RZhF	(RZFZA)	Referativnyy zhurnal. Fizika
RZhRadiot	(RZRAB)	Referativnyy zhurnal. Radiotekhnika
Sb1	sbornik	Second Internation Symposium: Ultrafast Phenomena Spectroscopy, Reinhardsbrunn, 30 Oct - 5 Nov 1980 (UPS-80). Proceedings. Vol. 1, Jena, year of publication not given.

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Sb3	Fizika tverdogo tela. Biofizika. Institut fiziki SOAN Krasnoyarsk, Krasnoyarskoye kniznoye izdatel'stvo, 1982.
Sb4	Lyuminestsentsiya i elektroprovodnost' kristallov s tsentrami okraski. NII Prikladnoy fiziki pri Irkutskom GU. Irkutsk, 1981. Deposit at VINITI, no. 981-1982, 10 March 1982.
Sb5	Polucheniye i svoystva tonkikh plenok. Institut problem materialovedeniya AN Ukr SSR. Sbornik nauchnykh trudov. Kiyev, Naukova dumka, 1982.
Sb6	Voprosy fiziki poluprovidnikov. Materialy dlya poluprovidnikovoy elektroniki. Shkola po fizike poluprovodnikov. 10th. 20-27 Feb 1982.
Sb7	Fizicheskiye metody issledovaniya biologicheskikh ob"yektov. Moskva, 1981.
Sb8	Teplo- i massoperenos: issledovaniye i razrabotka, Minsk, 1981.
Sb9	Chislennyye metody mekhaniki sploshnoy sredy, vol. 13, no. 3, Vychislitel'nyye problemy fiziki. Novosibirsk, 1982.
Sb10	Priborostroyeniya, no. 5, Minsk, Vyssheyskay shkola, 1982.
Sb11	Impul'snaya fotometriya, no. 7, Leningrad, 1981.
Sb12	Sovremennaya elektronika v opticheskom proborostroyenii, Leningradskiy institut tochnoy mekhaniki i optiki. Trudy Leningrad, 1981.
Sb13	Voprosy teplofiziki yadernykh reaktorov, no. 10, Moskva, 1981.
Sb14	Elementy optoelektronnykh ustroystv. Barnaul, 1981.
Sb15	Obrabotka informatsii v sistemakh svyazi. Leningrad, 1981.
Sb16	Opticheskiye metody issledovaniy gazovykh potokov i plazmy. Vsesoyuznaya shkola po metodam aerofizicheskikh issledovaniy, Krasnoyarsk, 4-13 1982, Tezisy dokladov. Institut teplo- i massoobmena AN BSSR. Minsk, 1982
Sb 17	Radiotekhnicheskiye sistemy i ustroystva. Leningrad, 1981.

Sb18 Polucheniye i svoystva tonkikh plenok. Institut problem materialovedeniya AN Ukr SSR. Sbornik nauchnykh trudov. Kiyev, Naukova dumka, 1981

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Sb20 Problemy fiziki neuporyadochenykh sistem. Opticheskiye yavleniya v poluprovodnikakh. Zimnaya shkola FTI po fizike poluprovidnikov. 10th. Materialy, Fiziko-tekhnicheskiy institut AN SSSR. Leningrad, 1982

Sb21 Wissenschaftliche Zeitschrift Padagogischen Hochschule Karl Liebknecht. Potsdam, no. 5, 1981.

Sb22 Problem sovremennoy teoreticheskoy fiziki, Khar'kovskiy fiziko-tekhnicheskiy institut AN Ukr SSR. Sbornik nauchnykh trudov. Kiyev, Naukova dumka, 1982.

Sb23 Obrabotka i interpretatsiya rezul'tatov nablyudeniy. Moskva, 1981.

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Sb29 Tekhnicheskiye sredstva sisten upravleniya i voprosy ikh nadezhnosti. Moskva, 1982.

Sb30 Prikladnyye zadachi teorii perenosa. Minsk, 1981.

Sb31 Uchenyye zapiski Yerevanskogo universiteta. Yestestvennyye nauki, no. 2, 1981.

Sb32 Molekulyarnayv spektroskopiya, no. 5, Leningrad, 1981.

Sb33 Fizika goreniya i metody yeye issledovaniya. Cheboksary, 1981.

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Sb38		Khimiya tverdogo tela, no. 4, Sverdlovsk, 1980.
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Sb42		Zentralinstitut fur Kernforschung Rossendorf bei Dresden, no. 443, 1981.
Sb43		Proboy dielektrikov i poluprovidnikov. Makhachkala, 1980.
Sb44		Elektronnyye i elektromagnitnyye izmeritel'nyye ustroystva i preobrazovateli. Omsk, 1981.
Sb45		Vsesoyuznoye soveshchaniye po uskoritelyam zaryazhennykh chastits. 7th. Dubna, 14-16 Oct 1980. Trudy. Vol. 2. Ob"yedinennyy institut yadernykh issledovaniy. Dubna, 1981.
SCF	(SCEFA)	Studii si cercetari de fizica
TiEKh	(TEKHA)	Teoreticheskaya i eksperimental'naya khimiya
TiMF	(TMFZA)	Teoreticheskaya i matematicheskaya fizika
TKiT	(TKTEA)	Tekhnika kino i televedeniya
Tr1	Trudy	Leningradskiy elektrotekhnicheskiy institut. Izvestiya, no. 294, 1981.
Tr2		Institut eksperimental'noy meteorologii. Trudy, no. 12 (96), 1982.
TR3		NII priborostroyeniya. Trudy, no. 42, Moskva, 1982.
TR4		Institut eksperimental'noy meteorologii. Trudy, no. 28 (101), 1982.
TR5		Institut eksperimental'noy meteorologii. Trudy, no. 26 (99), 1981.
TR6		Gosudarstvennyy opticheskiy institut. Trudy, vol. 48, no. 182, 1981.
TVT	(TVYTA)	Teplofizika vysokikh temperatur
UFN	(UFNAA)	Uspekhi fizicheskiy nauk
UFZh	(UFIZA)	Ukrainskiy fizicheskiy zhurnal
VBU	(VBMFA)	Belorusskiy universitet. Vestnik. Seriya 1. Matematika, fizika, mekhanika

VMU	(VMUFA)	Moskovskiy universitet. Vestnik. Fizika, astronomiya
ZhETF	(ZETFA)	Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhETF P	(ZEPRA)	Pis'ma v Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhFKh	(ZFKHA)	Zhurnal fizicheskoy khimii
ZhNiPFiK	(ZNPFA)	Zhurnal nauchnoy i prikladnoy fotografii i kinematografii
ZhNKh	(ZNOKA)	Zhurnal neorganicheskoy khimii
ZhPMTF	(ZPMFA)	Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki
ZhPS	(ZPSBA)	Zhurnal prikladnoy spektroskopii
ZhTF	(ZTEFA)	Zhurnal tekhnicheskoy fiziki
ZhTF P	(PZTFD)	Pis'ma v Zhurnal tekhnicheskoy fiziki

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